REMARKS

Applicant acknowledges with appreciation the courtesy extended to Applicant's representative during the interview that was held at the U.S. Patent and Trademark Office on March 31, 2009.

Reconsideration of presently solicited Claims 1 to 18 respectfully is requested. As discussed during the interview, for the reasons indicated hereafter, these claims, particularly as amended herein, are urged to define patentable subject matter. The concept of Applicant's specifically claimed contribution is urged to be absent in the reasonably derived teachings of the prior art.

Applicant has provided a novel and improved insulation system which comprises at least three (3) circumferentially arranged specifically defined layers. The system is designed to surround parts, such as pipes, containers, ventilation ducts, and the like, which possess an outer surface temperature which periodically is below the dew point of the ambient air which is encountered during service. Such parts commonly require insulation in order to seek to address water condensation issues as discussed in Applicant's Specification.

The outer layer of the claimed insulation system is a layer of vapour barrier through which water vapour passes with difficulty by diffusion or convection. See Applicant's Specification at Page 4, lines 24 to 27.

Adjacent the part that is surrounded by the at least three (3) layers is a thermal insulating layer.

A layer of hygroscopic material partially makes contact with the inner thermal insulating layer. Also, such layer of hygroscopic material is at least partially connected to the layer of vapour barrier which is positioned on the outside. The

hygroscopic material is arranged so as not to make contact with the outer surface of the installation part that receives the insulation system. The partial contact of the layer of hygroscopic material with the thermal insulating layer makes possible the removal condensate present in the insulating layer. The transport of condensate present in the inner thermal insulating layer effectively is carried out by means of capillary action as water is drawn into openings in areas between where the partial contact is made with the layer of hygroscopic material. See Applicant's Specification in this regard at Page 5, lines 22 to 36. The condensate from the thermally insulating layer is absorbed by the hygroscopic layer and thereafter passes through the opposite side of the hygroscopic layer to the outer layer of vapour barrier where it passes to outside ambient air by diffusion or convection and thereafter is removed into the atmosphere by evaporation. Accordingly, deleterious moisture is effectively removed from the surfaces of insulated pipes, containers, ventilation ducts, and the like, in an efficient, straightforward, and relatively inexpensive manner. Representative different and more complex attempts to address condensation concerns at the surfaces of insulated pipes are discussed in Applicant's Specification.

By amendment, the form of the Specification is modified at Page 4 in accordance with the practice commonly utilized in the United States in order to eliminate in the Specification express reference to specific claims. No new matter is introduced.

The continued rejection of presently solicited Claims 1, 3, 12, and 14 under 35 U.S.C. §102(b) over the different teachings of U.S. Patent No. 5,441,083 to Korsgaard would be lacking sound technical and legal bases. The teachings of

Korsgaard are already acknowledged and discussed in Applicant's Specification at Page 2, lines 7 to 23, where International Patent Publication No. WO 91/18237 is identified. There, a dissimilar approach is provided for the insulation of cold pipes. According to one embodiment of Korsgaard, the proposed pipe container has an inner water-absorbing layer (made of water-absorbing felt), an intermediate heat-insulating layer and an outer water-absorbing layer (made of water-absorbing felt). The water-absorbing felt is arranged so as to enclose and be in contact with the pipe (forming the inner layer of water-absorbing felt) and further extending through a longitudinal slot (4, 16) in the intermediate heat-insulating layer, which slot is used when applying the insulation system over a pipe, in such a manner that it forms flaps (forming the outer water-absorbing layer) which are exposed to the surroundings. Moisture/condensation absorbed by the water-absorbing felt on the outside of the pipe is thus passed through the slot and is allowed to evaporate freely in the atmosphere via the flaps. According to a second embodiment, if the material of the intermediate heat-insulating layer has high permeability to water vapour, the intermediate heat-insulating layer may possess an outer diffusion proof layer (plastic film). In this case it is to be noted that the water-absorbing felt projecting through the slot is arranged on the outside of the diffusion proof layer, if any. See Col. 2, lines 8 to 13. According to the second embodiment of Korsgaard (the only embodiment comprising a vapour barrier layer/diffusion proof layer), the insulation system starting from the outside comprises the outer water-absorbing layer (in the form of flaps), the outer diffusion proof layer, the intermediate heat-insulating layer and the inner water-absorbing layer. The inner water-absorbing layer is connected with the outer water-absorbing layer with a part of water-absorbing felt that projects through the slot. The

part of the water-absorbing felt in Korsgaard which projects through the slot and is exposed on the outside of the insulation system is arranged on the outside of the vapour barrier and is thus without contact with the heat-insulating layer. Moreover, the outer water-absorbing layer is not circumferentiallv arranged. On the contrary, it is only in the form of flaps covering a small part of the insulation system. The structural composition of the layers in the insulation system according to the presently solicited claims is thus different than contemplated in Korsgaard. The concept of the presently solicited claims is absent in Korsgaard. The withdrawal of the rejection is respectfully urged to be in order and is respectfully requested.

Likewise, the continued rejection of presently solicited Claims 1 to 18 under 35 U.S.C. §102(b) over the different teachings of International Patent Publication WO 01/53740 to Shaffer would be similarly inappropriate. Shaffer relates to an insulation system in the form of a tubular sleeve that operates on the same principle as Korsgaard, i.e., an inner layer of water-absorbing wicking material, an intermediate insulating material, a layer of vapour retarder, and an outer layer in the form of flaps of a wicking material. The wicking material is arranged so as to enclose the pipe and form flaps projecting through a longitudinal slot in the sleeve which is used when applying the insulation system over a pipe, whereby the two layers of wicking material are in physical contact with each other. The vapour retarder surrounds the outer perimeter of the insulating layer. Shaffer further comprises an additional sealing flap of a vapour barrier material which is adapted to cover the external flaps of wicking material to prevent excessive moisture absorption from the surroundings. The first layer of wicking material is in fact arranged to be in direct contact with the pipe to be insulated and is thus without contact with the vapour

retarder. Moreover, that part of the wicking material of Shaffer which projects through the slot and is exposed on the outside of the insulation system is arranged on the outside of the vapour retarder and thus is without contact with the thermally intermediate insulating layer. The structural composition of layers in the insulation system according to the presently solicited claims is thus different from that stated in Shaffer.

Moreover, the outer layer of wicking material is not circumferentially arranged. On the contrary, it is only in forms of flaps covering a small part of the insulation system. The concept of the presently solicited claims is absent in Shaffer. The withdrawal of the rejection is respectfully urged to be in order and is respectfully requested.

Finally, the continued rejection of presently solicited Claims 1 to 18 under 35 U.S.C. §103(a) over the reasonably derived teachings of U.S. Patent No. 5,690,147 to Cridland et al. in view of the deficient teachings of Shaffer would be lacking a sound basis. Cridland et al. can be characterized as a further variant of the different approaches of Korsgaard and Shaffer. Here the extent of the water transporting material is reduced. Instead of covering the entire length of the pipe, the hygroscopic material is arranged, for instance, in the form of strips which are equidistantly spaced from each other along the length of the pipe. Just as with the teachings of Korsgaard, the hygroscopic material extends from direct contact with the surface where condensation occurs, i.e., the insulated surface, to the outside of the insulation where it is exposed to ambient air and forms an evaporation surface. Accordingly, the outer water-absorbing layer is not circumferentially arranged. On the contrary, it only forms flaps which cover a small portion of the insulation system.

Applicant has provided an insulation system without loose flaps of hygroscopic material. Applicant is able to achieve satisfactory removal of condensed water even though it comprises a layer of hygroscopic material which is not in contact with the inner surface exposed to condensed water or with the outside atmosphere.

One skilled in the relevant area of technology when considering the teachings of Korsgaard, Shaffer, and Cridland et al. would find that in each instance a pipe container of an insulating material is provided with a longitudinal slot to allow the insulation system to be applied over the pipe that is to be insulated. On the inside of the pipe container (i.e., the inside of the insulating material) there is a layer of water-absorbing material. The layer has a surface area that surrounds the inside of the pipe container when mounted on the pipe and also projects through a slot to the outside of the pipe container and forms flaps which freely expose the water-absorbing material to the outside ambient conditions. Such flaps of water-absorbing material are positioned on the outside of an outer vapour barrier layer if one is present. Accordingly, the water-absorbing material of the references extends in a continuous pathway from the position where the condensation is formed (i.e., the cold pipe) and outward to the surrounding atmosphere where evaporation takes place. As seen from the inside, the references teach a layer of water-absorbing material, a layer of insulating material, a vapour barrier layer (if any) and finally an outer layer of water-absorbing material. The two layers of water-absorbing material are interconnected in the thickness direction of the system to form a continuous path of water-absorbing material from the inside of the insulation system to the outside. It should be appreciated that this continuous path and usage of flaps are essential for

the system of the references to function. The references provide no teaching or incentive to depart from their basic concept and to remove the layer of water-absorbing material from the inside of the system at the source of the condensation. The continuous pathway of water-absorbing material from the innermost part to the outside is essential. No incentive is provided to remove the water-absorbing material from the outside of the system and instead arrange it as a layer between the insulating material and the vapour barrier layer (if any) in a position where it cannot form a free evaporation surface to the atmosphere. If such removal were attempted, this key feature of the references would neither contact the surface where condensation occurs or the ambient atmosphere. There is no logic from the teachings of the references why one would attempt to reconstruct the product of the references as presently claimed. Accordingly, there is nothing in the references to reasonably suggest a circumferentially arranged insulation as presently claimed which provides the hygroscopic material as a layer between the thermally insulating layer and the layer of vapour barrier without physical contact with the surface where the condensation is formed. Even if a person skilled in the art were to drastically change the product of the references, there are still no teachings in the references that there be a partial connection of the thermally insulating layer and layer of hygroscopic material that facilitates capillary action through openings (i.e., drawing of water into openings) and that there be at least a partial connection between the layer of vapour barrier and the hygroscopic layer.

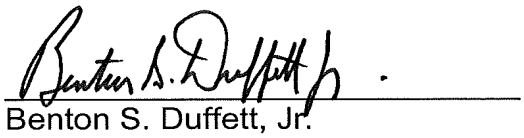
It is respectfully submitted that a *prima facie* obviousness of the presently claimed subject matter respectfully is absent in the reasonably derived teachings of the references. To establish *prima facie* obviousness of a claimed invention, all of

the claim limitations and their combination must reasonably be taught or suggested in the prior art. They are not. See in this regard M.P.E.P. §2143.03 citing *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in the claim must be considered when judging the patentability of the claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494 (CCPA 1970). It is not sufficient as a matter of law that words can be found in different contexts by an Examiner after a reading of Applicant's teachings when they are not combined or reasonably suggested to be combined as presently claimed by the authors of the references.

If there is any remaining point that requires clarification prior to the allowance of the Application, the Examiner is urged to telephone the undersigned attorney so that the matter can be expeditiously resolved.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: April 7, 2009 By: 

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